

**CLAIM AMENDMENTS**

1-20. (canceled)

21. (currently amended): An isolated glycosylated or nonglycosylated composition of the formula

$$\beta^2 \approx \alpha\text{-(linker)}_m\text{-}\beta^1 \quad (1); \text{ or}$$

$$\beta^1\text{-(linker)}_m\text{-}\alpha \approx \beta^2 \quad (2)$$

wherein each of  $\beta^1$  and  $\beta^2$  has the amino acid sequence of the  $\beta$  subunit of a vertebrate glycoprotein hormone, or a variant thereof;

“ $\alpha$ ” has the amino acid sequence of the  $\alpha$  subunit of a vertebrate glycoprotein hormone or a variant thereof;

“linker” is a linker moiety; and

“ $\approx$ ” is a noncovalent link between  $\alpha$  and  $\beta^2$ ;

m is 0 or 1;

with the proviso that if  $\beta^1$  is CG then  $\beta^2$  is not FSH wherein one of  $\beta^1$  and  $\beta^2$  confers agonist activity and the other confers antagonist activity.

22. (previously presented): The composition of claim 21, wherein  $\beta^1$  and  $\beta^2$  are  $\beta$  subunits of different glycoprotein hormones or variants thereof.

23. (previously presented): The composition of claim 21, wherein  $\beta^1$  and  $\beta^2$  exhibit different biological half-lives.

24. (canceled)

25. (currently amended): The composition of claim 21, wherein ~~both  $\beta^1$  and  $\beta^2$  confer FSH agonist activity; or~~

~~wherein both  $\beta^1$  and  $\beta^2$  confer CG agonist activity; or~~

~~wherein both  $\beta^1$  and  $\beta^2$  confer LH antagonist activity; or~~

~~—wherein one of  $\beta^1$  and  $\beta^2$  confers FSH agonist activity and the other confers LH antagonist activity; or~~

~~wherein one of  $\beta^1$  and  $\beta^2$  confers FSH agonist activity and the other confers CG agonist activity; or~~

wherein one of  $\beta^1$  and  $\beta^2$  confers LH antagonist activity ~~or lowered LH agonist activity~~ and the other confers CG agonist activity.

26. (withdrawn, currently amended): The composition of claim 21, wherein ~~both  $\beta^1$  and  $\beta^2$  confer FSH antagonist activity; or~~

~~—wherein both  $\beta^1$  and  $\beta^2$  confer CG antagonist activity; or~~

~~—wherein both  $\beta^1$  and  $\beta^2$  confer LH agonist activity; or~~

~~—wherein one of  $\beta^1$  and  $\beta^2$  confers FSH antagonist activity and the other confers LH agonist activity; or~~

wherein one of  $\beta^1$  and  $\beta^2$  confers FSH antagonist activity and the other confers CG antagonist activity; or

wherein one of  $\beta^1$  and  $\beta^2$  confers LH agonist activity and the other confers CG antagonist activity.

27. (currently amended): The composition of claim 21, wherein one of  $\beta^1$  and  $\beta^2$  confers FSH agonist activity and the other confers LH antagonist activity; ~~or~~

~~wherein both  $\beta^1$  and  $\beta^2$  confer FSH agonist activity; or~~

~~wherein both  $\beta^1$  and  $\beta^2$  confer LH antagonist activity.~~

28. (currently amended): A pharmaceutical formulation which ~~comprises~~ consists essentially of an effective amount of the composition of claim 21 in admixture with at least one pharmaceutically acceptable excipient.

29-39. (canceled)